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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/556,136	07/28/2006	Yoshiaki Kumamoto	280999US0PCT	5996

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EXAMINER	
SMITH, JORDAN J	
ART UNIT	PAPER NUMBER
4153	

NOTIFICATION DATE	DELIVERY MODE
03/20/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/556,136	KUMAMOTO ET AL.	
	Examiner	Art Unit	
	JORDAN SMITH	4153	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 April 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *24 February 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *20051109; 20060131; 20060209; 20060424; 20060817*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 6 is objected to because of the following informalities: "warming articles" needs to be corrected to read, "warming article" for proper antecedent basis. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 4, 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Yahara et al. (Japanese Patent Application Publication No. 01-201253). All rejections under 102(b) will be based on this publication, but for the sake of clarity, reference will be made to the English language translation supplied with this Office Action.

4. Yahara et al. teaches a warming article having a heat generating main body comprising a heat generating element (Figure 1; [Claims]) having water vapor generating capability (10:2 teaches the article heating up to 80 degrees Celsius, which is sufficient for water vapor generation) and an air permeable holder for holding the heat generating element (Figure 1:**2**; 8:9-15; 11:12-14), the heat generating main body being expandable by water vapor generated with heat generation of the heat generating element ([Claims]; [Industrial Field of

Application] both teach a heat generating main body comprising fibrous material. 4:last paragraph teaches examples of the fibrous material which are expandable by water vapor, such as cotton or pulp.). The heat generating element comprises a molded sheet prepared by papermaking and containing an oxidizable metal, a moisture-retaining agent, a fibrous material, and water ([Claims]).

5. Yahara et al. teaches a method of producing a warming article, comprising a heat generating, shaped article, characterized in that an electrolyte is incorporated into the heat generating shaped article (Claims).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 2, 6-9, 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yahara et al. (Japanese Patent Application Publication No. 01-201253). Yahara et al. teaches a warming article according to claim 1 as discussed above. Yahara et al. also teaches a warming article having a heat generating main body comprising a heat generating element having water vapor generating capability (as discussed above) and an air permeable holder for holding the heat generating element (Figure 1; [Claims]). The holder has an air permeability of 10000 sec/100 ml or less (11:12-14). The heat generating element comprises a molded sheet prepared by papermaking and containing an oxidizable metal, a moisture-retaining agent, a fibrous material, and water ([Claims]).

9. Yahara et al. does not teach the warming article generating 1.0 to 100 mg/(cm^2x10 min) of water vapor.

10. However, the warming article taught by Yahara et al. is capable of producing water vapor in this range, because the amount of water vapor produced is a function of material choice and the concentration of various components of the pulp mixture disclosed. It would be a matter of routine experimentation and design choice to produce a warming article as taught by Yahara et al. which has a water vapor production within the claimed range. Therefore it would have been obvious to one skilled in the art at the time of the invention to make a warming article according to claim 1 that capable of generating 1.0 to 100 mg/(cm^2x10 min) as a matter of course in optimizing the invention.

11. Yahara et al. does not teach that the warming article of claims 1 or 7 has a receiving part for receiving a part of a body being inserted. However, Yahara et al. teaches fitting the warming article to the human body, and it is well known by those skilled in the art to shape warming articles into gloves, hats, bands, etc. for insertion of a part of a body. Therefore it would have been obvious to one skilled in the art to provide a receiving part (e.g. the inside of a mitten of the open end of a hat) on the warming article for receiving a part of a body being inserted.

12. Claims 5, 10, 12-17 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Yahara et al. (Japanese Patent Application Publication No. 01-201253).

13. Yahara et al. teaches a warming article according to claims 4 and 9, as discussed above. The sheet is molded by papermaking ([Claims]). The molded sheet contains at least 50% by weight of components other than the fibrous material (6:last paragraph). The fibrous material has a CSF of 600 ml or less (This is a measured property of pulp drainage. The Office has no way of measuring the CSF of the pulp used in Yahara et al. and the burden rests on Applicant to provide proof if the fibrous material disclosed in Yahara et al. does not have this property and the claimed property renders the claimed invention patentably distinct from that taught by Yahara et al.).

14. If the fibrous material taught by Yahara et al. does not have a CSF of 600 ml or less, it would have obvious to one skilled in the art at the time of the invention to use such a fibrous material as a matter of design choice, as such

properties are easily obtainable in pulp materials as taught by Yahara et al. and discussed above.

15. Yahara et al. teaches a heat generating, shaped article prepared by three-dimensionally shaping a molded sheet, the molded sheet comprising an oxidizable metal, a moisture-retaining agent, and a fibrous material ([Claims]) and having a maximum stress of 0.3 to 5 MPa and a breaking elongation of 2.0 to 10% and a maximum stress of 0.5 to 15 MPa and a breaking elongation of 0.8 to 5% in its dried state (The MPa and breaking elongation are measured properties which the Office has no way of measuring and the burden rests on Applicant to provide proof if the molded sheet disclosed in Yahara et al. does not have these properties and the claimed properties render the claimed invention patentably distinct from that taught by Yahara et al.).

16. If Yahara et al. does not teach such properties, it would have been an obvious design choice among readily available materials to one skilled in the art at the time of the invention to use a fibrous material having the claimed properties because no unique material structure is disclosed and therefore all claimed materials are considered to have similar properties to similar materials known in the art.

17. The molded sheet contains at least 50% by weight of components other than the fibrous material while dry (6:last paragraph). The fibrous material has a CSF of 600 ml or less (This is a measured property of pulp drainage. The Office has no way of measuring the CSF of the pulp used in Yahara et al. and the burden rests on Applicant to provide proof if the fibrous material disclosed in

Yahara et al. does not have this property and the claimed property renders the claimed invention patentably distinct from that taught by Yahara et al.).

18. If the fibrous material taught by Yahara et al. does not have a CSF of 600 ml or less, it would have obvious to one skilled in the art at the time of the invention to use such a fibrous material as a matter of design choice, as such properties are easily obtainable in pulp materials as taught by Yahara et al. and discussed above.

19. The molded sheet is molded by papermaking ([Claims]). The molded sheet is disposed between an air permeable sheet and an air impermeable sheet and three-dimensionally shaped together with the air permeable sheet and the air impermeable sheet (Figure 1; 8:9-15; 11:12-14. Porous and non-porous materials are air-permeable and air impermeable, respectively.).

20. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yahara et al. (Japanese Patent Application Publication No. 01-201253) in view of Toru et al. (Japanese Patent Application Publication No. 2002-078728). The warming article according to claim 1 is taught by Yahara et al. as discussed above. Toru et al. teaches another warming article with an air permeable holder. The holder has a moisture (water vapor) permeability within the range of 1.5 to 10 kg/(m^2x24 hr) (Claim1; Figures). The holder taught by Toru et al. is substitutable for the holder taught by Yahara et al. because both are air permeable layers for holding body application warming articles of comparable size. Therefore it would have been obvious to one skilled in the art at the time of the invention to substitute the holder taught by Toru et al. for the holder taught by

Yahara et al. in order to transfer the desirable moisture-permeability found by Toru et al. to the heating article of Yahara et al.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JORDAN SMITH whose telephone number is (571)270-1915. The examiner can normally be reached on Mon - Thu, 9:30am - 5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Jackson can be reached on (571) 272-4697. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

J.S.
/J. S./
Examiner, Art Unit 4153
25 February 2008

/Gary Jackson/
Supervisory Patent Examiner
Art Unit 4153